TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT process)

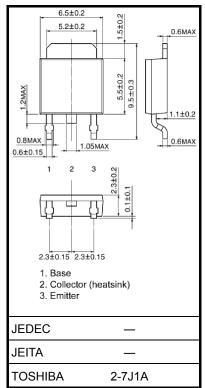
2SA1244

High Current Switching Applications

- Low collector saturation voltage: V_{CE} (sat) = -0.4 V (max) (IC = -3 A)
- High speed switching time: $t_{stg} = 1.0 \ \mu s$ (typ.)
- Complementary to 2SC3074

Absolute Maximum Ratings (Ta = 25°C)

Characteristics		Symbol	Rating	Unit	
Collector-base voltage		V _{CBO}	-60	V	
Collector-emitter voltage		V _{CEO}	-50	V	
Emitter-base voltage		V _{EBO}	-5	V	
Collector current		Ι _C	-5	А	
Base current		Ι _Β	-1	А	
Collector power dissipation	Ta = 25°C	Pc	1.0	W	
	Tc = 25°C	ГC	20		
Junction temperature		Тј	150	°C	
Storage temperature range		T _{stg}	-55 to 150	°C	



Weight: 0.36 g (typ.)

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the

reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

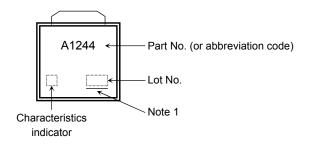
Unit: mm

Electrical Characteristics (Ta = 25°C)

Chara	icteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Collector cut-off c	urrent	I _{CBO}	$V_{CB} = -50 \text{ V}, \text{ I}_{E} = 0$	_	_	-1	μA
Emitter cut-off cur	rent	I _{EBO}	$V_{EB} = -5 V, I_C = 0$	_	_	-1	μA
Collector-emitter	oreakdown voltage	V (BR) CEO	I _C = -10 mA, I _B = 0	-50	_	_	V
DC current gain		h _{FE (1)} (Note)	V _{CE} = -1 V, I _C = -1 A	70	_	240	
		h _{FE (2)}	V _{CE} = -1 V, I _C = -3 A	30	_	_	
Collector-emitter	saturation voltage	V _{CE (sat)}	I _C = -3 A, I _B = -0.15 A	_	-0.2	-0.4	V
Base-emitter satu	ration voltage	V _{BE (sat)}	I _C = -3 A, I _B = -0.15 A	_	-0.9	-1.2	V
Transition frequer	су	f _T	V _{CE} = -4 V, I _C = -1 A	_	60	_	MHz
Collector output capacitance		C _{ob}	V _{CB} = -10 V, I _E = 0, f = 1 MHz	_	170	_	pF
-	Turn-on time	t _{on}	$20 \ \mu s \qquad \text{INPUT} \qquad \begin{matrix} IB2 \\ B2 \\ IB2 \\ VCC = -30 \ V \end{matrix} \qquad OUTPUT \qquad OUTPU$	_	0.1	_	
	Storage time	t _{stg}		_	1.0	_	μs
	Fall time	t _f	I _{B1} = 0.15 A, I _{B2} = 0.15 A DUTY CYCLE ≤ 1%	_	0.1	_	

Note: h_{FE (1)} classification O: 70 to 140, Y: 120 to 240

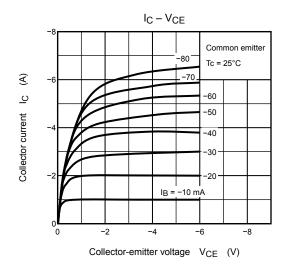
Marking

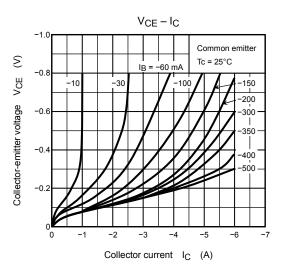


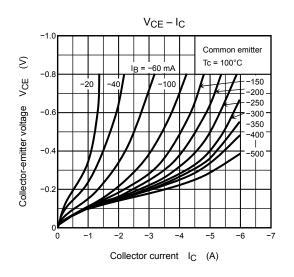
Note 1: A line under a Lot No. identifies the indication of product Labels. Not underlined: [[Pb]]/INCLUDES > MCV Underlined: [[G]]/RoHS COMPATIBLE or [[G]]/RoHS [[Pb]]

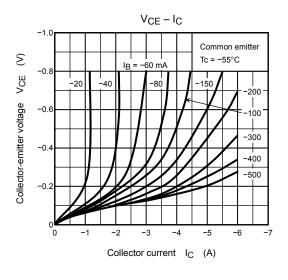
Please contact your TOSHIBA sales representative for details as to environmental matters such as the RoHS compatibility of Product. The RoHS is the Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

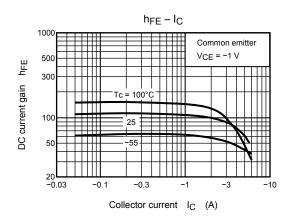
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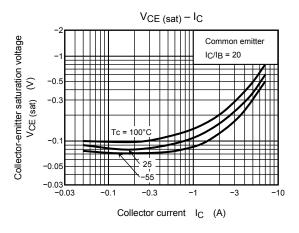




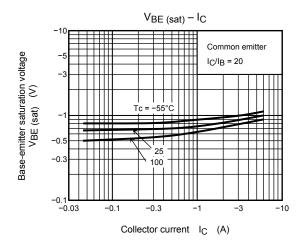


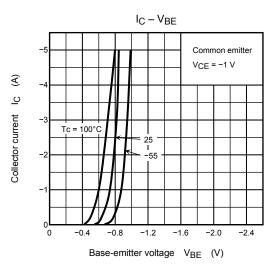


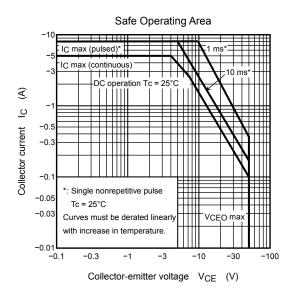




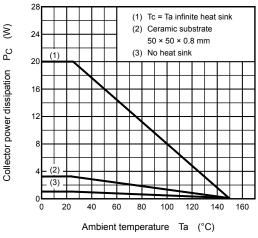
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